

REMARKS/ARGUMENTS

Claims 1-6 and 8-12 are pending in the present application after this amendment cancels claim 7 and adds claims 11 and 12. Claims 1 and 5 have been amended. The specification has been amended to respond to the Examiner's objections. Figure 1 has been amended to include reference numeral 13 for "oil circulation," while reference numeral 12 continues to refer to "volatile constituents." The amendments do not add new matter and find support throughout the specification and figures.

Claims 1-3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 5,987,976 to Sarangapani (the Sarangapani reference). Claims 1, 2, 4, 6, and 8 stand rejected under 35 U.S.C. § 102(a) as being anticipated by United States Patent No. 6,421,588 to Janata (the Janata reference). Claim 1 has been amended to include the features of cancelled claim 7, which was rejected in the Office Action under 35 U.S.C. § 103(a) over Janata and Kobayashi, and claims 2-4, 6, and 8 depend from claim 1. Therefore, claims 1-4, 6, and 8 are discussed below in connection with the 35 U.S.C. § 103(a) rejection over Janata and Kobayashi.

Claims 7, 9, and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Janata reference in view of Japanese Patent No. 1-315219 to Kobayashi (the Kobayashi reference). As noted above, claim 7 has been canceled, and the features of canceled claim 7 have been incorporated in amended claim 1. Applicants therefore discuss the 35 U.S.C. § 103(a) rejection over the Janata reference in view of the Kobayashi reference in relation to amended claim 1, and Applicants respectfully traverse the rejection.

In order for a claim to be rejected for obviousness under 35 U.S.C. § 103(a), not only must the prior art **teach or suggest each element of the claim**, but the prior art must also **suggest combining the elements in the manner contemplated by the claim**. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990), cert. denied, 111 S. Ct. 296 (1990); In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990). The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. M.P.E.P. §2142. To establish a *prima facie* case of obviousness, the Examiner must show, *inter alia*, that there is some **suggestion or motivation**, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, **to modify or combine the references** and that, when so modified or combined, the prior art **teaches or suggests all of the claim limitations**.

M.P.E.P. §2143. Applicants respectfully submit that these criteria for obviousness are not met here.

Independent claim 1 relates to a device for determining the condition of motor oil that includes an arrangement configured to determine a concentration of volatile constituents of the oil. The arrangement includes a first membrane which is impermeable for oil, but is permeable for the volatile constituents. Although the Examiner admits that the Janata reference does not teach that the arrangement includes a first membrane which is impermeable for oil, but is permeable for the volatile constituents (Office Action; page 7, sec. 12), the Examiner asserts that this feature is taught by the Kobayashi reference.

It is respectfully submitted that there is no suggestion in the prior art to modify the Janata reference in view of the Kobayashi reference in order to arrive at the invention of claim 1. The Examiner asserts that it would have been obvious to employ in the Janata reference the teaching of the Kobayashi reference. Specifically, the Examiner states that “[m]odifying the chamber of Janata to include a volatile permeable membrane would have been obvious to one of ordinary skill in the art as a means of sealing the chamber to prevent potential contamination of the sensor array by oil contacting the array.” (Office Action at page 7, sec. 12). However, this asserted motivation for combining the references is not apparent from either reference. The Janata reference relates to determining the condition of lubricating oil in an oil-utilizing mechanism. The Janata reference gives no suggestion of the usefulness of a combination with the monitor for dissolved gas in oil discussed in the Kobayashi reference. Similarly, the Kobayashi reference provides no motivation to combine the monitor discussed therein with the method and system discussed in the Janata reference. Neither the Janata reference nor the Kobayashi reference discusses, or even suggests, *contamination of a sensor as a problem* in sensors of this type. Further, the Kobayashi reference, which apparently utilizes a membrane, does not suggest that the membrane serves a purpose of eliminating or reducing sensor contamination. The only motivation to combine the references comes from the disclosure of the Applicants, which constitutes improper hindsight reasoning. Since there is no motivation or suggestion to combine the references, the applied references do not render the subject matter of claim 1 obvious.

Additionally, the applied references teach away from the asserted combination, since the Janata reference apparently relates to a sensor that detects gasses in a headspace (Janata;

figure 1, element 14), while the Kobayashi reference apparently relates to a sensor for gases dissolved in oil. (Kobayashi; Abstract, Constitution, ll. 1-4). The Janata reference, having headspace 14 separating surface 16 of the oil from sensor array 18, teaches away from combination with the Kobayashi reference, which apparently utilizes direct contact between the membrane and the oil in order to detect *dissolved constituents* of the oil. This is particularly apparent in light of figures 1-3 of the Kobayashi reference, which apparently show oil chamber 1 with intake and outtake arrows having the gas permeable membrane 6 apparently situated in the middle. In an arrangement according to the figures of the Kobayashi reference, oil flowing into oil chamber 1 would flow over membrane 6, eliminating the possibility for the existence of a headspace. A membrane adapted to be permeated by dissolved constituents in oil, as apparently recited in the Kobayashi reference, would not function if combined with the device according to the Janata reference utilizing a headspace. A headspace according to the Janata reference would prevent the membrane of the Kobayashi reference from being permeated by dissolved constituents of the oil. Since combining the applied references would prevent the device in the reference from performing according to their normal function, the combination of the references is improper. Therefore, the applied references do not render obvious the subject matter of claim 1.

Claims 2-6 and 8-10 depend from claim 1 and are therefore allowable for at least the same reasons as claim 1 is allowable.

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the Janata reference in view of United States Patent No. 5,942,676 to Potthast et al. (the Potthast reference). Claim 5 depends from claim 1 and is therefore allowable for at least the same reasons as amended claim 1 is allowable. The addition of the Potthast reference fails to cure the critical deficiency discussed above with respect to the Janata and Kobayashi references.

For at least the reasons discussed above, withdrawal of the rejections of claims 1-6 and 8-10 is hereby respectfully requested.

New claim 11 recites features that are not discussed, or even suggested, by any of the cited references. Claim 12 depends from claim 11. It is respectfully submitted that new claims 11 and 12 are allowable.

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Reply to Office Action of July 8, 2004

[10191/3108]

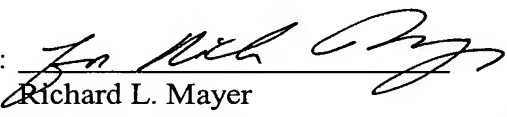
CONCLUSION


Applicants respectfully submit that all of the pending claims of the present application are now in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 1. This sheet, which includes Figs. 1-2, replaces the original sheet including Figs. 1-2. In Fig. 1, two reference numerals "12" on the left side of the figure have been replaced with reference numeral "13."